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[Title in German of the object of the invention:]

Klemmkasten für eine elektrische Maschine

TERMINAL BOX FOR AN ELECTRIC MACHINE

Patent Claims

1. Terminal box for an electric machine, having an isolating supporting base or socket, which can be attached to the machine casing, which supporting base is having a round or polygonal outer contour for a multiple number of supply terminals, having unequal height and arranged in a staggered or graduated manner, to which supply terminals the inner machine supply conductors and the connecting cables are connected, whereby the supporting base is arranged in a hermetically sealed manner in a round or polygonal opening in the lower part of the box, which lower part together with its insertion passage, located on the side of the edge, for the outer connecting cable, can be twisted in any desirable way around the supporting base after the loosening or

unscrewing of its connection to the machine casing, so that the connecting cables are freely lead to the supply terminals, out of which the frontal ones are arranged so that they are at a lower than the rear supply terminals,

c h a r a c t e r i z e d i n t h a t in thickened edge zones around the sealed central opening (3A) of the supporting base (3), which opening is penetrated by the machine supply conductors [supply leads] (6), there are attached flat supporting pieces (5), to which equal supply terminals (4) are only supported in such a way that they can be longitudinally displaced, and are kept in place so that they are fastenable by means of a threaded connection [screw connection] (7), which is jointly used for the connection of the machine supply conductor, respectively.

2. Terminal box, as claimed in 1, characterized in that the supply terminal (4) has a concentric longitudinal hole (4D) as well as edge projections (4E), parallel thereto, which laterally surround the supporting piece.

3. Terminal box as claimed in claim 1 or 2, characterized in that the supply terminal (4) has a T-shaped cross-section, to which transverse surface (4A), there is [sic] attached terminal screws (4B) for the assigned connecting cable (5).

4. Terminal box as claimed in claim 1, 2 or 3, characterized in that the flat supporting piece (5) is offset in the upper segment, accommodating the transversely projecting threaded connection (7), and the supply terminal (4) is guided and kept in

place only on the offset segment in such a way that it is stable and can be displaced longitudinally.



The invention pertains to a terminal box in accordance with the preamble of the patent claim 1.

In terminal boxes* [*Translator's note: Also known as connection boxes or terminal housings], a number of the supply terminals is higher than the remaining supply terminals so that in the case of supply terminals, having the same length, each one of which is preferably arranged in a parallel sequence or series, there exists a gradation in height, which provides an opportunity - when these supply terminals, located within the circular supporting base, are positioned in a transverse or inclined manner with respect to the connecting cables - for a displacement of the lower part of the box around any angular segments in the case of simple, non-crossing feeding of the connecting cable. Under certain circumstances, depending upon the side, from which the connecting cable is fed to, the lower supply terminals must be interchanged with the higher supply terminals, which requires a considerable installation input, as well as different supply terminals, particularly because the machine terminal connections must be connected to the lower side of the

uninterrupted supply terminals prior to the attachment of the supporting base to the machine casing.

The objective to get along with unified supply terminals, and to provide an opportunity for an easy and rapid carrying out of their matching to the height forms the basis of the invention.

In accordance with the invention, the set objective is achieved by means of the measures in accordance with the characteristic part of patent claim 1.

Additional advantageous embodiments of the invention are object of the subclaims.

An exemplified embodiment of the invention, diagrammatically represented in the drawing, is elucidated in greater detail as follows whereby the drawing shows a longitudinal section through a terminal box, having supporting base, arranged in the lower of its box.

The terminal box consists of a lower part 1 of the box and a box lid 2, having connecting plane, arranged in a slanting manner. In the bottom 1A of the lower part of the box, there is provided a circular opening 1B for the accommodation of an isolating supporting base 3 for a multiple number of graduated supply terminals 4, having different height, of which only two are shown. One ought to imagine the remaining terminals as being arranged in line, respectively congruent or superimposable with respect to the ones shown. The supply terminals 4 are provided with a T-shaped cross-section, and each one of them has four connecting terminal screws 4B on its upper transverse area 4

for connecting cables 5, denoted solely by a dash-dotted line, which connecting cables 5 are fed through the front wall of the lower part of the box 1, and are led in a non-crossing manner onto the transverse areas 4A, located in different planes. The leg 4C of each supply terminal, which leg is perpendicular thereto, is embodied or designed as flat guiding part, having a concentric longitudinal hole 4D, and edge projections 4E, parallel thereto. This guiding part is supported so that it can be shifted only longitudinally on one of the flat supporting pieces 5, attached in thickened edge zones around the central opening 3A of the supporting base 3, and is kept in place in the desired position by means of the longitudinal hole and a threaded connection 7, which is jointly used for the connection of the machine supply conductors 6, and which is penetrating a threaded borehole 5A in the supporting piece, whereby the threaded connections can easily be accessed from the top. The supporting pieces 5 are offset with respect to one another in the upper segment whereby the supply terminals 4 rest against the inner sides of the offset segments in such a way that they can be moved longitudinally, and, therewith can be displaced up to the thickened edge zones between the lower segments of the supporting pieces 5 and the machine supply conductors 6, corresponding to the length of the respective longitudinal hole 4D. The central opening 3A in the supporting base 3 is filled with a rubber plug 8 with respect to the machine casing, and the annular gap between supporting base 3 and opening 1B in the lower part 1 of the box

is sealed in known way by means of a flat piece of rubber. The supporting base 3 is screwed to the machine housing, which is not diagrammatically represented, and - after the loosening of the connecting screw of the box's lower part 1 on the machine casing - allows a twisting of the same about the supporting base 3. The machine supply conductors 6 can be star-connected or delta-connected, or connected in a similar manner, in a desirable way by means of terminal links or jumpers 9, whereby these terminal links or jumpers 9 also interact with the threaded connections [screw joints] 7, which are in addition to this secured by counter nuts. Because the screw connections 7 - independently from the adjustment height of the supply terminals 5 - remain in a plane, the installation of the terminal links or jumpers 9 is possible in a simple way.

ANNOTATION

Terminal Box for an Electric Machine

For the purposes of swivelling about a supporting base (3) for the supply terminals (4), which support base is arranged stationary with respect to the machine, the supply terminals (4) are kept on flat supporting pieces (5) in the support base with the help of longitudinal hole (4D) and edge projections (4E) by means of screw connections (7), in a stable manner, while an opportunity is provided for a limited height adjustment. Besides this, the screw connections (7) are used for the mounting of terminal links or jumpers (9). The support base is inside an

opening in the bottom of the box part, and has a central opening (3A) , by means of which the machine supply conductors or feeding cables (6) are lead to the supply terminals.

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